

That which is claimed is:

1. A fiber optic distribution cable having at least one predetermined access location along the distribution cable for providing access to at least one pre-connectorized optical fiber, the distribution cable comprising:

at least one preterminated optical fiber withdrawn from the distribution cable at the access location;

a connector attached to the preterminated optical fiber; and

a protective shell encapsulating the access location to protect the pre-connectorized optical fiber.

2. The distribution cable of claim 1, wherein the protective shell is formed by an overmolding process.

3. The distribution cable of claim 1, wherein the protective shell comprises a monotube having a crush resistant property that is threaded onto the distribution cable and positioned over the access location.

4. The distribution cable of claim 1, wherein the outer diameter of the protective shell is less than about 1.5 inches.

5. The distribution cable of claim 1, wherein the protective shell is sufficiently flexible to permit the fiber optic distribution cable to be installed through a conduit having an inner diameter of at least about 1.9 inches.

6. The distribution cable of claim 1, wherein the preterminated optical fiber is spliced to a connectorized optical fiber and the spliced together length of the preterminated optical fiber and the connectorized optical fiber is at least about 20 inches.

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7. The distribution cable of claim 1, further comprising a plurality of cable clips adapted for attachment to the distribution cable and operable for centering the distribution cable within an overmolding tool.

10 8. The distribution cable of claim 1, further comprising at least one ripcord disposed underneath the protective shell and operable for removing the protective shell to expose the at least one pre-connectorized optical fiber.

15 9. A fiber optic distribution cable having at least one predetermined access location for providing access to at least one pre-connectorized optical fiber, the distribution cable comprising:

a tubular body for containing a plurality of optical fibers;

at least one preterminated optical fiber withdrawn from the tubular body at the access location;

20 a transition piece adjacent the tubular body and operable for transitioning the preterminated optical fiber from the tubular body and into a protective tube;

a connector attached to the preterminated optical fiber;

a plurality of cable centralizers each defining a central opening for receiving the distribution cable and at least one routing slot for receiving an optical fiber; and

a protective shell encapsulating the access location and the cable centralizers to protect the preterminated optical fiber and the connector.

10. The distribution cable of claim 9, further comprising:

5 an end cap positioned on the distribution cable adjacent each end of the access location; and

a diameter transition piece adjacent each end of the access location extending between the outer diameter of the distribution cable and the outer diameter of the end cap.

10 11. The distribution cable of claim 9, wherein the protective shell is formed by an overmolding process.

12. The distribution cable of claim 9, wherein the protective shell comprises a monotube having a crush resistant property that is threaded onto the distribution cable
15 and positioned over the access location

13. The distribution cable of claim 9, wherein the outer diameter of the protective shell is less than about 1.5 inches.

20 14. The distribution cable of claim 9, wherein the protective shell is sufficiently flexible to permit the fiber optic distribution cable to be installed through a conduit having an inner diameter of at least about 1.9 inches.

15. The distribution cable of claim 9, wherein the preterminated optical fiber is spliced to a connectorized optical fiber and the spliced together length of the preterminated optical fiber and the connectorized optical fiber is at least about 20 inches.

5 16. The distribution cable of claim 10, further comprising a heat shrinkable material for sealing the diameter transition piece, the end cap and the access location.

10 17. The distribution cable of claim 9, further comprising at least one ripcord disposed underneath the protective shell and operable for removing the protective shell to expose the at least one pre-connectorized optical fiber.

15 18. A method of mid-span accessing and pre-connectorizing at least one optical fiber of a fiber optic distribution cable comprising a cable sheath and a tubular body containing a plurality of optical fibers, the distribution cable having at least one predetermined access location for providing access to the pre-connectorized optical fiber, the method comprising:

removing a length of the cable sheath of the distribution cable to expose a predetermined length of the tubular body containing the plurality of optical fibers;

20 cutting a first access point along the tubular body to provide access to at least one of the plurality of optical fibers;

severing the at least one optical fiber at the first access point to produce a preterminated optical fiber;

cutting a second access point along the tubular body upstream from the first access point;

withdrawing the preterminated optical fiber through the second access point of the tubular body to present a desired length of the preterminated optical fiber; and

attaching a connector to the preterminated optical fiber.

5 19. The method of claim 18, wherein attaching a fiber optic connector comprises direct connectorizing a fiber optic connector to the preterminated optical fiber.

10 20. The method of claim 18, wherein attaching a fiber optic connector comprises splicing a connectorized optical fiber to the preterminated optical fiber to produce the pre-connectorized optical fiber.

21. The method of claim 18, further comprising:

transitioning the preterminated optical fiber out of the tubular body and into at least one protective tube via a transition piece.

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22. The method of claim 18, further comprising:

protecting and sealing the access location.

20 23. The method of claim 22, wherein protecting and sealing the access location comprises overmolding the exposed length of the tubular body, the preterminated optical fiber and the connector.

24. A fiber optic communications network comprising:

a fiber optic distribution cable comprising a plurality of optical fibers and at least one predetermined access location for providing access to at least one pre-connectorized optical fiber;

5 a closure comprising a connector port for connecting the pre-connectorized optical fiber of the fiber optic distribution cable to a respective connectorized optical fiber on one end of a drop cable; and

an optical network connection terminal for receiving the other end of the drop cable.

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25. The communications network of claim 24, wherein at least one of the plurality of optical fibers is withdrawn from the distribution cable at the access location and direct connectorized to a fiber optic connector to produce the pre-connectorized optical fiber.

15 26. The communications network of claim 24, wherein at least one of the plurality of optical fibers is withdrawn from the distribution cable at the access location and spliced to a connectorized optical fiber to produce the pre-connectorized optical fiber.

20 27. A multi-purpose tool operable for securing and removing a protective member, and for extracting a ripcord to expose at least one pre-connectorized optical fiber at a predetermined access location along a fiber optic distribution cable, the tool comprising:

an elongated body having a tip at one end operable for engaging a securing mechanism provided on the protective member and a slot adjacent the tip that is operable for engaging a ripcord.; and

25 an engagement shank at the opposite end for insertion into a rotating tool.

28. The tool of claim 27, wherein the body comprises a first portion adjacent the tip having a first diameter for engaging the securing mechanism and a second portion between the first portion and the engagement shank having a second diameter that is greater than the first diameter for receiving the ripcord.

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